USSN for PCT/US04/41275 Filed June 8, 2006 Preliminary Amendment

Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

- Claim 1. (Canceled) A flow-through oxygenator comprising an emitter for electrolytic generation of microbubbles of oxygen comprising an anode separated at a critical distance from a cathode and a power source all in electrical communication with each other, wherein the emitter is placed within or adjacent to a conduit for flowing water.
- Claim 2. (Canceled) The emitter of claim 1 wherein the anode is a metal or a metallic oxide or a combination of a metal and a metallic oxide and the anode is platinum and iridium oxide on a support and the cathode is a metal or metallic oxide or a combination of a metal and a metallic oxide.
- Claim 3. (Canceled) The critical distance of claim 1 which is 0.005 to 0.140 inches.
- Claim 4. (Canceled) The critical distance of claim 1 which is 0.045 to 0.060 inches.
- Claim 5. (Canceled) The product of claim 1 wherein the water is supersaturated with oxygen and of an approximately neutral pH.
- Claim 6. (Canceled) A method for enhancing growth and yield of plants comprising the administration of supersaturated water on said plants.
- Claim 7. (Canceled) The method of claim 6 wherein the supersaturated water is delivered to the plants in hydroponic culture or through drip irrigation.
- Claim 8. (Currently Amended) A method for treating waste water comprising passing the waste water through a ocnduit comprising the emitter of claim 1 aerating the waste water with microbubbles of oxygen.
- Claim 9. (Newly Presented) The method of claim 8 wherein the microbubbles of oxygen are electrolytically generated by an emitter comprising an anode separated at a critical distance from a cathode and a power source all in electrical communication with each other.

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- Claim 10. (Newly Presented) The method of claim 8 wherein the emitter in placed within the container holding the waste water.
- Claim 11. (Newly Presented) The method of claim 8 wherein the emitter is placed in a flow-through conduit and the waste water is passed through the conduit.
- Claim 12. (Newly Presented) The method of claim 8 wherein the microbubbles of oxygen are generated by forcing oxygen through a microorifice.
- Claim 13 (Newly Presented) The method of claim 8 wherein the solid matter of the waste is caused to flocculate.
- Claim 14. (Newly Presented) The method of claim 8 wherein the oxygen content of the waste water is raised to at least 5 mg/l.